

U.S. Patent Application Serial No. **09/977,363**  
Amendment dated November 12, 2003  
Reply to OA of **August 11, 2003**

**REMARKS**

Claims 9, 10 and 14-17 are pending in this application. An amendment is presented to claim 14 to correct a typographical error. No new matter has been added by this amendment.

**Claims 9-10 and 14-17 are rejected under 35 U.S.C. §103(a) as being unpatentable over Japanese Patent JP 07230906 A (JP '906) (Office action point no. 3)**

Reconsideration of the rejection is respectfully requested.

The Examiner cites paragraph [0031] of the reference as teaching "the addition of oxides that form the basis of the coating (i.e. precursor) in the amounts instantly claimed." Applicants respectfully disagree.

Applicants first note that paragraph [0031] of the reference does not appear to discuss the primary metal compound which is the source of the metal oxide film. Claim 9 recites that "a solution into which a metal compound **as the metal oxide film forming source** is incorporated in an amount of from 0.1 wt% to 20 wt% in terms of the metal oxide" (emphasis added). In the reference, ~~silicon oxide is the metal oxide, and silicon is the metal.~~ Silicon oxide (as-silica), in the "silica system precursor and the organic system precursor", would appear to be the source for the silicon oxide coating.

Paragraph [0031] refers to a solid-state powder, but this solid state powder is not the precursor of a metal in the silicon oxide film. That is, the powders in paragraph [0031] of the reference are not the source of metal oxide in the coating in the reference.

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In addition, Applicants note that claim 9 recites that “**a sol solution into which a metal compound** as the metal oxide film forming source **is incorporated in an amount** of from 0.1 wt% to 20 wt% in terms of the metal oxide” (emphasis added). That is, the recited 0.1 wt% to 20 wt% limitation refers to the concentration of the metal compound **in the sol solution**. (See, for example, page 15, second paragraph, of the present specification).

By contrast, the “2-40 mol%” in paragraph [0031] of the reference presumably refers to the mole ratio of the solid-state powder to either the “silica system precursor” or the “organic system precursor” or both (this is unclear from the machine translation). However, it clearly does **not** refer to the concentration of the solid-state powder in the sol solution of the “silica system precursor”. This can be further seen by the use of a mole ratio, given by “mol%”, in the reference; this is an inappropriate unit for defining overall concentration of a powder in a sol solution. Paragraph [0031] does not give a teaching on the concentration of any compound in the sol solution (i.e., the “silica system precursor”) of the reference.

Applicants therefore submit that the reference neither teaches nor suggests the limitation of “~~using a sol solution into which a metal compound as the metal oxide film forming source is~~ incorporated in an amount of from 0.1 wt% to 20 wt% in terms of the metal oxide”, which is recited in both independent claims 9 and 14. Applicants therefore submit that claims 9, 10 and 14-17 are novel and non-obvious over JP 07230906A.

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If, for any reason, it is felt that this application is not now in condition for allowance, the Examiner is requested to contact Applicants undersigned agent at the telephone number indicated below to arrange for an interview to expedite the disposition of this case.

In the event that this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. Please charge any fees for such an extension of time and any other fees which may be due with respect to this paper, to Deposit Account No. 01-2340.

Respectfully submitted,

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